

**Amendments to the Claims**

Please amend the claims as follows:

1. (Currently amended) A method of forming a trench in a semiconductor device, comprising:

forming a polish stop layer on a semiconductor substrate;

forming an anti-reflection coating on the polish stop layer;

selectively etching the anti-reflection coating to form an anti-reflection coating pattern;

etching the polish stop layer and etching the semiconductor substrate to a predetermined depth to form a trench such that ends of the polish stop layer adjacent to the trench are rounded; and

forming an insulation layer that fills the trench.

2. (Currently amended) The method of claim 1, wherein etching the polish stop layer and the semiconductor substrate comprises injecting is performed such that following the injection of one or more of CHF<sub>3</sub>, CF<sub>4</sub>, O<sub>2</sub>, HeO<sub>2</sub>, and Ar, creating a plasma is created and dry etching the polish stop layer and the semiconductor substrate is performed.

3. (Currently amended) The method of claim 2, wherein the etching the polish stop layer and the semiconductor substrate is performed by comprises injecting one of at most 60sccm of CHF<sub>3</sub>, gas, at most 60sccm of CF<sub>4</sub> gas, at most 30sccm of O<sub>2</sub> gas, at most 60sccm of HeO<sub>2</sub>, gas, and at most 200sccm of Ar gas.

4. (Currently amended) The method of claim 2, wherein creating a plasma comprises applying 50-500W of power is applied to generate plasma in a state where while injecting one or more of CHF<sub>3</sub>, CF<sub>4</sub>, O<sub>2</sub>, HeO<sub>2</sub>, and Ar is injected.

5. (Currently amended) The method of claim 2, ~~wherein further comprising creating a pressure environment of 5-100mTorr is created for use during etching the polish stop layer and the semiconductor substrate.~~
6. (Currently amended) The method of claim 1, ~~further comprising, prior to forming a polish stop layer on a semiconductor substrate:~~  
~~forming an anti-reflection coating on the polish stop layer; and~~  
~~selectively etching the anti-reflection coating to form an anti-reflection coating pattern,~~  
~~wherein an area of the polish stop layer exposed through the antireflection coating pattern is and the semiconductor substrate to a predetermined depth are etched to form the trench, and ends of the anti-reflection coating pattern and ends of the polish stop layer under the ends of the anti-reflection coating pattern are also etched such that the ends of the anti-reflection coating are formed into a rounded configuration.~~
7. (Not entered)
8. (Currently amended) The method of claim [[7]] 6, ~~wherein the etching the polish stop layer and the semiconductor substrate comprises injecting is performed such that following the injection of one or more of CHF<sub>3</sub>, CF<sub>4</sub>, O<sub>2</sub>, HeO<sub>2</sub>, and Ar, creating a plasma is created and dry etching the polish stop layer and the semiconductor substrate is performed.~~
9. (Currently amended) The method of claim 8, ~~wherein the etching the polish stop layer and the semiconductor substrate is performed by comprises injecting one of at most 60sccm of CHF<sub>3</sub> gas, at most 60sccm of CF<sub>4</sub> gas, at most 30sccm of O<sub>2</sub> gas, at most 60sccm of HeO<sub>2</sub> gas, and at most 200sccm of Ar gas.~~
10. (Currently amended) The method of claim 8, ~~wherein creating a plasma comprises applying 50-500W of power is applied to generate plasma in a state where while injecting one or more of CHF<sub>3</sub>, CF<sub>4</sub>, O<sub>2</sub>, HeO<sub>2</sub>, and Ar is injected.~~

11. (Currently amended) The method of claim 8, wherein further comprising creating a pressure environment of 5-100mTorr ~~is created for use during etching~~ the polish stop layer and the semiconductor substrate.
12. (Currently amended) The method of claim 1, wherein the polish stop layer ~~is deposited to~~ has a thickness of 1000-3000Å.
13. (Currently amended) The method of claim 1, wherein the polish stop layer ~~is made of comprises~~ a material that is more slowly polished than an insulation material of the insulation layer.
14. (Currently amended) The method of claim 13, wherein the polish stop layer ~~is formed of comprises~~ a silicon nitride layer ~~deposited to~~ having a thickness of 1000-3000Å.
15. (Currently amended) The method of claim 14wherein etching the polish stop layer and the semiconductor substrate comprises injecting is performed such that following the injection of one or more of CHF<sub>3</sub>, CF<sub>4</sub>, O<sub>2</sub>, HeO<sub>2</sub>, and Ar, creating a plasma is created and dry etching the polish stop layer and the semiconductor substrate is performed.
16. (Currently amended) The method of claim 15, wherein ~~the etching the polish stop layer and the semiconductor substrate is performed by~~ comprises injecting ~~one of~~ at most 60sccm of CHF<sub>3</sub>, gas, at most 60sccm of CF<sub>4</sub> gas, at most 30sccm of O<sub>2</sub> gas, at most 60sccm of HeO<sub>2</sub>, gas, and at most 200sccm of Ar gas.
17. (Currently amended) The method of claim 15, wherein creating a plasma comprises applying 50-500W of power ~~is applied to generate plasma in a state where while injecting~~ one or more of CHF<sub>3</sub>, CF<sub>4</sub>, O<sub>2</sub>, HeO<sub>2</sub>, and Ar is injected.

18. (Currently amended) The method of claim 15, ~~wherein further comprising creating a pressure environment of 5-100mTorr is created for use during etching the polish stop layer and the semiconductor substrate.~~

19. (Currently amended) The method of claim 1, wherein ~~during forming an~~ the insulation layer ~~that fills the trench, following the formation of~~ comprises forming the insulation layer to cover the polish stop layer and inner walls of the trench, and chemical-mechanical polishing ~~is performed on~~ the insulation layer until the polish stop layer is exposed.

20. (Currently amended) The method of claim 1, wherein prior to forming the insulation layer, the method further comprises forming a liner oxidation layer ~~is formed~~ on the polish stop layer and the trench, then and forming the insulation layer ~~is formed~~ comprises depositing an insulation layer material on the liner oxidation layer such that the trench is filled with a material forming the insulation layer material.